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DEPT PASS TO WHA/EPSC CORNEILLE, EB/ESC/IEC IZZO, S/P MANUEL,
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USAID FOR LAC/CEN KSIENKIEWICZ

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E.O. 12958: N/A
TAGS: [EAGR](#) [ECON](#) [ENRG](#) [PREL](#) [PGOV](#) [SENV](#) [TRGY](#) [ETRD](#) [HO](#)
SUBJECT: Honduras: Latin American-Caribbean BioFuels Initiative

REF: A. 2006 State 164558
[1](#)B. 2006 Tegucigalpa 1935
[1](#)C. 2005 Tegucigalpa 836

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[1](#)1. Summary: This cable responds to ref (A). Despite confusion and controversy in the traditional energy sector, Honduras has made real progress in biofuel development. Efforts are focused primarily on biodiesel, mainly through the cultivation of African Palm oil, and a consumer trial is now underway involving several fleets of city buses. The willingness and potential to produce ethanol appears to exist, but outside of a few ambitious plans no definitive action has yet been taken. With the supply of African Palm oil-based biodiesel set to triple within the next 2 years, the fuel may eventually be able to meet up to 30 percent of Honduras' diesel requirements. End Summary.

TRADITIONAL ENERGY SECTOR OVERVIEW

[1](#)2. The current Honduran fuel market is dominated by Diesel and Fuel oil (Bunker) and characterized by a limited number of importers. Specifically, the country used 15.7 million barrels of refined fuel in 2005, with the distribution as follows: Bunker 40%, Diesel 35%, Regular and Premium mogas (motor fuel) 18%, LPG 3%, and all else 3%. Importers include HonduPetrol, Texaco, Exxon, Shell and DIPPSA. While Shell contracts separately for fuel imports, the company uses Texaco facilities to off-load, store and distribute downstream. DIPPSA physically imports but uses Exxon to contract shippers. (Note: Trafigura Beheer B.V., a Dutch oil products trader, has recently signed a deal with DIPPSA to provide their fuel in lieu of Exxon. End Note).

[1](#)3. State energy company ENEE uses the bunker plants to power over 60 percent of their electricity. The break-down of total energy inventory is as follows:

ENEE Energy Capacity By Source

Thermal (mainly Bunker) 63 percent
Hydroelectrical 33 percent
BioMass 4 percent

HonduPetrol and Texaco source their bunker from Switzerland-based trader Glencore International A.G., which supplies approximately 85 percent of all bunker fuel imports into Honduras. Owned by business magnate Freddy Nasser, HonduPetrol supplies bunker fuel to

electricity generation customers including Nasser companies Emersa and EMCE, as well as Nasser confidant Schukry Kafie's Luffusa 2 and Luffusa 3 plants (Note: Luffusa 1 uses diesel. End Note). Only thermal energy provider Elcohsa operates independently of Nasser and Kafie, importing its bunker through Texaco.

¶4. In 2005, concerns that the limited number of importers permitted industry collusion that could artificially keep prices high led the GOH to form a select commission charged with recommending to the GOH a strategy to break the perceived oligopoly and allow greater competition (ref B). Ironically, the commission proposed a government-led bid for one company to import all of Honduras' requirements in each type of fuel category for an initial period of one year. While the bid continues, debate over whether the bid will succeed given numerous legal challenges clouds the process in uncertainty.

BIODIESEL OVERVIEW

¶5. Honduras' biofuel potential centers around African Palm-based biodiesel. In April 2006, President Jose Manual "Mel" Zelaya Rosales announced that within five years and with the help of the Brazilian government and the Inter-American Development Bank, biodiesel will meet thirty percent of Honduras' fuel needs (ref C). Currently, there are approximately 80 thousand hectares devoted to African Palm plantations, located on the country's humid north coast region. Until this year the fuel was used principally to power machinery belonging to businessman Miguel Facusse's Dinant corporation. Dinant is a diversified food products company that uses African Palm oil as an ingredient while exporting the balance, principally to the U.S. Overall, African Palm oil is Honduras' fifth largest export at \$56 million per year.

¶6. Currently there are four biodiesel refineries in Honduras using African Palm oil, producing approximately 14 thousand gallons of

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biodiesel a day. In addition to Dinant, the other producers include HonduPalma, Jaremar, and Coapalma. With escalating fuel prices over the past year, Dinant has devoted more and more palm oil to biodiesel production, peaking currently at 6 thousand gallons a day. With new improvements now underway at their big plant in Trujillo, however, Dinant is anticipating expanding production of up to 32 thousand gallons a day by the end of 2006. (Comment: There is some concern that Dinant could quickly dominate the biodiesel market. End Comment).

¶7. A fifth plant, located near the fresh water lake of Yojoa, produces approximately 1500 gallons a day of biodiesel from Tilapia, a fast growing fish raised on a multitude of aquaculture farms. The producer, Aquafinca, is planning to bring production up to 10 thousand gallons a day within a year. Honduras is currently Central America's top exporter of Tilapia at USD 30 million a year, with 20 percent growth expected in 2006. Another biodiesel initiative using ten thousand pine nut plants is currently in a pilot phase in a remote area in central Honduras.

ETHANOL OVERVIEW

¶8. While the GOH has shown an interest in developing ethanol from sugar cane, currently the country's 65 thousand hectares under cultivation are used to produce raw sugar for export and internal consumption (Note: A small plant exists to produce refined sugar. End Note). The industry employs about 25 thousand workers directly with about 150 thousand benefiting indirectly. All production, commerce and distribution are privately owned, with seven large regional mills sending their production to the Sugar Miller's Association (CISA), which distributes nationwide. Forty-nine percent of the crop is cultivated by large producers, with fifty-one percent cultivated on 1,650 independent farms. Most of the plantations are located in the northwest, with smaller producers in central and southern Honduras. Regional crushing capacity is as

follows:

CRUSHERS NAME CRUSHING CAPACITY
(METRIC TONS)

Azucarera Hondrena, S.A.	81,266
Azucarera Choluteca, S.A.	41,499
Azucarera Chumbagua, S.A.	30,558
Azucarera La Grecia, S.A.	97,641
Azucarera Yojoa, S.A.	33,080
Azucarera Tres Valles, S.A.	45,571
Azunosa	48,591

Total 378,206

Note: There is one plant that produces refined sugar with a capacity of 35 thousand short tons per year.

19. Sugarcane overall is Honduras' sixth most important agricultural crop, accounting for about 5 percent of agricultural GNP. That said, Honduran sugar cane producers are considered inefficient by regional standards, with yields of 85.84 metric tons per hectare. Bagasse, the biomass remaining after sugarcane stalks are crushed to extract their juice, is used for electrical power generation by the mills. Harvesting methods still use an annual burning, which covers most of the region in heavy smoke and routinely shuts down all air traffic to major cities for several days each year. Concerted action to reduce this source of pollution has been stymied by the powerful sugar industry.

110. Sources from the sugar industry have stated that they want to add an additional 10 thousand hectares of sugar cane to begin producing ethanol as a gasoline additive (Note: a production car can use up to 10 percent ethanol with mogas without modifications. End Note). The sugar industry is requesting USD 80 million from the GOH to help expand the effort. Recently, a Canadian investor group announced a USD 150 million investment in sugar cane cultivation on 45 thousand hectares with the express purpose of producing ethanol. They forecast initial production of about 7,300 gallons per day generating about four thousand new jobs. Additionally, a group of investors from Taiwan have indicated that they plan to invest up to USD 30 million in the planting of 20 thousand hectares of Cassava, also known as yuca. The plant could eventually produce over 10 thousand gallons of ethanol per day. (Comment: The willingness and capability to expand ethanol production appears to exist. While the focus may be on biodiesel, potential exists for a more coordinated effort to promote ethanol for domestic consumption or for export.

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End Comment).

BIOMASS MAY HELP ENEE IN COMING YEARS

111. For state-run energy company ENEE, the primary renewable energy components come from Hydroelectric sources. El Cajon, a large dam in central Honduras, produces the most energy at 300 MW. Overall, only 37 percent of ENEE's potential energy comes from renewable sources. President Zelaya recently came to an agreement with the government of Taiwan on a multi- billion USD project to start another dam project called Patuca III, a project that has faced considerable grass roots level resistance. A wind energy project that has been mired in controversy could potentially add another 30 MW.

112. Currently only about 4 percent of ENEE's energy inventory comes from biomass sources, principally sugar bagasse and similar residue from African palm production. Both sources use the biomass to power their own production facilities while selling any extra capacity to ENEE at a relatively cheap 6.3 cents per KiloWatt Hour (KWH) (Note: ENEE averages between 11 and 12 cents per KWH overall. End Note). A Florida based company called eGrass (www.egrass.com) just signed an MOU with ENEE to provide 240 MegaWatts (MW) from two plants using a high-yield perennial herbaceous crop that can be harvested year-round. Officials from eGrass indicate that the land has been

identified and production of electricity could start within two years, providing a quick and environmentally friendly way to meet ENEE's crushing energy needs (Note: With energy requirements on the northern business centers growing at over 10 percent, the eGrass proposal could constitute ENEE's baseline energy requirement in 2009. End Note). The deal, which would commit ENEE to purchase the energy at around 7.5 cents per KWH, is pending review by the committee council that runs ENEE.

AFRICAN PALM BIODIESEL INITIATIVES

¶13. Dinant's efficiency in production caught the eye of the GOH, which was desperately looking for fuel alternatives as it struggled with enacting the national fuel bid. The GOH responded by appointing former Congressman Moises Starkman (uncle of former ENEE General Manager Leion Starkman) to led the effort to find a solution in the capacity of a minister-level biodiesel "czar." Starkman's charter was not only to reduce Honduras' energy dependency and gain some measure of control over prices at the pump, but to increase employment and clean-up the environment in the process.

¶14. Starkman noted Dinant's ability to increase production capacity and quickly recommended an increase in the number of African Palm trees under cultivation. In March 2006 GOH Minister of Agriculture Hector Hernandez signed an agreement with Malaysia to import an additional 1.2 million palm plants, which would bring the total number of hectares under cultivation to 200 thousand. Per Starkman's calculations, palm oil production would stimulate 1.5 new jobs per hectare resulting in 300,000 new jobs as the trees begin to produce the oil. Equally as important, Starkman recommended that the future plantations be located in several underdeveloped areas, including Puerto Lempira in Honduras' remote Mosquitia region, bringing desperately needed infrastructure development, jobs and a reliable fuel source.

¶15. While the increased hectares under cultivation takes the estimated two years to bring additional biodiesel to market, Starkman has undertaken a consumer trial to introduce biodiesel to the Honduran public. The trial officially started in August 2006, and will involve 620 city buses in the capital city of Tegucigalpa and northern industrial hub of San Pedro Sula. The independent owner of these buses have agreed to start using a 5 percent biodiesel blend (B-5) from participating gasoline stations, a blend that will be increased incrementally over the following four months to B-20. The idea is to not only to gradually clean the engines (Note: biodiesel actually cleans the carbon build-up from years of diesel usage. End Note) but to educate consumers that biodiesel can and will work efficiently in their car engines. The trial may soon move to the northern city of La Ceiba. Overall, Starkman has estimated that his pilot will reduce the overall diesel bill for Honduras by at least USD 2 million.

¶16. A similar initiative is being launched by the mayor of Tegucigalpa Ricardo Alvarez. He plans to finance the initial engine cleaning of up to 60 city buses with the intent of running them from

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the start on 100 percent biodiesel (B-100). Per the mayor's coordinator, former Minister of Industry Irving Guerrero, approximately 5 bus engines per week will be cleaned and potentially modified at a cost of approximately USD 1,500 each (Note: some older engine parts may corrode if used with biodiesel. End Note). The city will provide financing for the initial cleaning, and use a software program to collect a nominal payment from the bus owners at the pump. The payments will gradually pay down the USD 1,500 over a set period of time. (Comment: Guerrero requested and was approved a U.S. Trade Development Authority grant to promote this project. A consultant is now being hired to help better develop the project specifics. One possible area of focus is car manufacturer certification of biodiesel in their engines. Fuel industry representatives and gasoline station owners have expressed concern over the response of manufacturers if consumers begin to complain. End Comment.)

¶17. Starkman and Alvarez have both made their projects non-compulsory, with the expressed intent to qualify for carbon emissions credits offered by the Kyoto Protocol. Carbon credits are measured in units of certified emission reductions (CERs), which are equivalent to one ton of carbon dioxide reduction. Developed countries that have exceeded the levels can either cut down emissions, or borrow or buy carbon credits from a developing country like Honduras. Starkman has outlined a sampling program to measure the reduction annually, and has estimated the potential payment at several million USD. Traditional fuel industry sources have argued for a compulsory B-5 blend available at all service stations, to ensure a consistent supply and equivalent tax benefits for suppliers (Comment: There would be no taxes levied on the biodiesel portion. The potential revenue loss from biodiesel blends is an issue for the GOH, which may limit the overall use of biodiesel in the economy. End Comment).

LEGAL FRAMEWORK

¶18. In order to promote the use of renewable fuels in Honduras, a biofuels law was introduced to Congress in 2005. The law sought to bring together the need for energy independence, new jobs, and reduced pollution within a judicial framework. Taxes are the most important issue: the law would exempt biofuel-related activity from all taxes for a period of twelve years. The exemption would include income, sales, and import taxes and would cover activities relating to biofuel studies and the construction, maintenance, and operation of biofuel plants. The law also calls for the creation of a Biofuels Technical Unit under the Ministry of Industry and Trade that would formulate and recommend public policies for the development of local biofuel products in conjunction with the energy, agro-industry, and agricultural sectors. The law has languished in Congress for several months, however, principally due to political factors (Note: The bill was introduced by a member of the nationalist party, now in opposition after last November's elections. It has yet to win a place on this Congress' agenda. End Note). A similar bill promoting renewable sources of electricity has also languished, but was re-introduced by the Zelaya Administration in early October 2006. The bill has yet to pass and faces stiff opposition from entrenched interests linked to fossil-fuel fired electricity generators.

¶19. Comment: The lack of energy independence remains a major issue in Honduras and, while 30 percent biodiesel usage may be a stretch, African Palm oil represents at least a hope of gaining some control over energy prices. The country's humid north coast is ideal for the African palm, and the expected employment and reforestation benefits may be on target. As one energy expert from the World Bank pointed out, however, only once in recent history has biodiesel been price-competitive with diesel, and only for a brief period of time. Correspondingly, the GOH needs to evaluate the fiscal impact of blending a high percentage of tax-exempt biodiesel into the nation's fuel supply. On ethanol, while the will and raw materials exist, lack of downstream infrastructure and a stalemate on the proposed law has limited advancement. If ethanol can gain the traction of African Palm-based biodiesel, though, Honduras may yet gain some degree of energy independence. End Comment.

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